

To accomplish both of higher performance of a crystal and lower cost in a semiconductor member, and to produce a solar cell having a high efficiency and a flexible shape at low cost, the semiconductor member is produced by the following steps, (a) forming a porous layer in the surface region of a substrate, (b) immersing the porous layer into a melting solution in which elements for forming a semiconductor layer to be grown is dissolved, under a reducing atmosphere at a high temperature, to grow a crystal semiconductor layer on the surface of the porous layer, (c) bonding another substrate onto the surface of the substrate on which the porous layer and the semiconductor layer are formed and (d) separating the substrate from the another substrate at the porous layer.

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